REMARKS

This application has been carefully considered in connection with the Examiner's Office Action dated June 24, 2008.   Reconsideration and allowance are respectfully requested in view of the following.

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Summary of Rejections

Claims 1-4, 7, 11-34 and 36-42 were pending at the time of the Office Action.

Claims 1-4, 7, 11-34 and 36-42 were rejected under 35 USC § 103.

Summary of Response

Claims1-4, 7, 11-34 and 36-42 are canceled.

Claims 43-78 are new.

Remarks and Arguments are provided below.

Summary of Claims Pending

Claims 43-78 are currently pending following this response.

Applicant Initiated Interview

Applicant thanks Examiner John Winter for his time and consideration of the arguments presented in the telephone interview on Tuesday, September 23, 2008. In the interview, Applicant presented arguments against the applicability of Suarez's agent-based peer-to-peer-type distributed computer environment to read on the claimed three-tier client-server-type distributed computer environment and Suarez's

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express teaching away from such a distributed computer environment. Examiner Winter suggested that the bus agents disclosed by Suarez provide a middleware environment such that the distributed computer architecture of Suarez may be interpreted as a three-tier client-server-type distributed computer environment. While not agreeing with the Examiner's characterization of the disclosure of Suarez, Applicant presented further arguments that none of the applied art provided teaching or suggestion of the combination of structural elements of the claimed enterprise integration layer, such as the enterprise object model, the client access interfaces, the business object server, and the set of adaptors, as recited in claim 1 for example. Examiner Winter indicated that these structural components of the enterprise integration layer were not being given patentable weight because they were not being claimed as performing an action in the system. While not agreeing with the Examiner's characterization of the claims and whether structural and functional limitations of a system claim should be given patentable weight, Applicant suggested rewriting the claims as methods that perform actions using the structural components of the enterprise integration layer. Examiner Winter agreed that all of the claim limitations would be given patentable weight upon rewriting the claims as methods. Examiner Winter further requested further clarification of the claimed business events, discussed in detail below. In the interest of advancing prosecution, the claims have been rewritten as methods as suggested by Examiner Winter.

Clarification of Business Events

Applicant notes that paragraph 0041 of the specification discloses, "Business events are key milestones within a process flow such as the completion of a credit check or the creation of an account." Applicant respectfully directs Examiner Winter to dependent claims 47, 58, 68, 74, and 78 which recite limitations further defining business events as key milestones within a process flow. Applicant further notes paragraph 0045 of the specification discloses, "For example, an event can be considered to occur upon the creation, reading, updating, or deleting of an object, upon the invocation of a particular method, upon the evaluation of an expression, or when similar activities occur." Applicant respectfully directs Examiner Winter to dependent claim 49 which further recites limitations that define criteria for which business events occur. Therefore, as disclosed in the specification and recited in the claims, business events are not messages other types of interactions or communications in and of themselves. Rather, business events mark the occurrences of interactions or communications of interest, such as the creation, reading, updating, or deleting of data or the invocation of a particular method. After the occurrence of a business event, a message may be published so as to notify entities that are interested in the business event of the occurrence of the event.

Response to Rejection

Applicant respectfully notes the detailed overview of the pending disclosure in the Response to Final Office Action dated February 28, 2008. In particular, Applicant notes the discussion of the structure of the enterprise integration layer and the

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interaction between the enterprise integration layer and the message broker of the pending application. Applicant respectfully submits that none of the applied art alone or in combination teaches or suggests an enterprise integration layer and a messaging system as described therein and claimed. All of the pending rejections rely on Suarez as a base reference. Suarez is directed to a peer-to-peer-type distributed computer environment that relies on agents to provide interoperability. The pending claims are directed in part to a client-server-type distributed computer environment that relies on an enterprise integration layer (i.e., middleware) to integrate front-office systems with back-office systems. By utilizing a distributed computing architecture where front-office systems interact through the enterprise integration layer to use back-office systems, the enterprise integration layer of the pending claims may become business event-aware and may publish business events based on the interactions between the front-office systems and the back-office systems through the enterprise integration layer. Suarez is directed to a wholly different paradigm in distributed computing. The fundamental differences in the distributed computing paradigms used by Suarez and the pending claims highlight the differences discussed in detail below.

At the highest level, the distributed computing architecture of Suarez does not have any central means for providing interoperability between services. Rather, Suarez relies on agents and bus agents at each host computer to provide interoperability with other agents and services. While Suarez may disclose the use of bus agents, the bus agents of Suarez simply provide administrative oversight of multiple agents. For example, the bus agents of Suarez may route messages to the appropriate agent, monitor the health of agents and detect failures, manipulate message flow, and

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manipulate the content of the messages similar to other agents. To further illustrate this distinction between a peer-to-peer-type distributed computing environment and a three-tier client-server-type distributed computing environment, Applicant respectfully notes Fig. 5 of Suarez depicting the service-to-service communication flow through Suarez's distributed computing environment using agents and bus agents. As shown in Fig. 5 of Suarez, all of the communications are point-to-point communications. That is one service communicates with one agent, which in turn communicates with one bus agent, which communicates with another bus agent, which communicates with another agent, which communicates with the destination service.

In contrast, Fig. 3 of the pending application depicts a many-to-one relationship between front-office applications 348 and the service broker 300 (i.e., the enterprise integration layer) as well as a one-to-many relationship between the service broker 300 and the back-office systems 350. Further, as discussed in paragraphs 0048-0050 of the pending application, the business object server 320 of the service broker 300 may support object assembly which aggregates data attributes from multiple back-office systems 350 into a composite object. Similarly, the business object server 320 may support object disassembly which breaks a composite object into multiple objects for storage in back-office systems 350. Further, the business object server 320 may support composite business services such that a single method call defined in the enterprise object model may translate into multiple service invocations. Therefore, an exemplary communication flow using the disclosed and claimed enterprise integration layer may include multiple front-end applications communicating with the enterprise integration layer to access objects of the enterprise object model, and the service

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broker implementing data functions or service methods associated with each of the access objects on multiple back-office systems (i.e., many-to-one and one-to-many).

Accordingly, Applicant respectfully submits that Suarez and the other applied art alone or in combination does not teach or suggest an enterprise integration layer and a messaging system as claimed.

Response to Rejections Under 35 U.S.C. 103

Claims 1-4, 7, 11-34, and 36-42 were rejected under 35 USC § 103(a) as being unpatentable over Suarez U.S. Patent No. 5,790,789, (hereinafter "Suarez") in view of Hejlsberg et al U.S. Patent No. 7,165,239, (hereinafter "Hejlsberg") and further in view of Bowman-Amuah U.S. Patent No. 6,742,015, (hereinafter Bowman-Amuah".

Claims 1-4, 7, 11-34, and 36-42 are canceled herein. None of the newly added pending claims 43-78 were rejected in the Office Action. However, the newly added claims are method claims that recite substantially similar limitations as were previously recited in claims 1-4, 7, 11-34, and 36-42. Accordingly, the arguments presented in the Response to Final Office Action dated February 28, 2008 are applicable to the currently pending claims.

In the Response to Arguments section on page 12 of the Office Action, the Office Action addressed the argument presented in section I of the Response to Final Office Action dated February 28, 2008 that none of the applied art teach or suggest automatically publishing business events in accordance with the interactions between the front-office systems and the back-office systems. In particular, the Office Action stated, "The Examiner replies that at Column 9, lines 53 Suarez discusses the process

flows associated with performing a task (i.e. interactions), Suarez states that attachments are distributed throughout the system (i.e. published). The Examiner contends that this feature meets the limitations of the claimed invention."

Applicant respectfully traverses. Column 9, line 53 - column 10, line 11 are repeated below for clarity:

> Referring to FIGS. 1 and 2, the illustrated computing environment, like related art computing environments, is adapted to facilitate the performance of prescribed tasks. Within the present computing environment, **tasks may be accomplished in accordance with a series of well-defined processes that operate on various work items.** As seen in FIG. 2, the illustrated process flow 22 is typically comprised of one or more activities 24 which are performed on a work item 25 **in a prescribed sequence.** It is through the communication of defined services 16 with one another that the various processes and process flows 22 are performed and tasks are accomplished. **Associated with each process or process flow 22 is a variety of other information referred to as attachments 26. These attachments include information attributable to the overall process 22, individual agents, individual activities 24, and/or work item 25.** A work item 25 is a collection of data that is flowing through the distributed system (e.g., forms, invoices, etc.) and is typically associated with specific processes defined by a participating organization. The attachments 26 may include information that is static as well as dynamic information generated by the process, modified by the process, or otherwise used within the process flow 22. A process flow 22 also typically involves or affects a plurality of users 13 and other participants and is typically adapted to operate on multiple work items concurrently. (bold added)

As noted above, Suarez discloses that the attachments are associated with each process flow 22. Applicant further notes the disclosure of Suarez in column 24, lines 33-35 which states, "The Attachments structure 118e provides attachment information for an agent which rides along with the messages that originate from the provided service." Therefore, in contrast to the Office Action's assertion that the attachments are distributed or published throughout the system, Suarez discloses that the attachments ride along with the messages that are communicated point-to-point between agents. Accordingly, Applicant maintains that Suarez, alone or in combination with the other

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applied art, does not teach or suggest automatically publishing business events in accordance with the interactions between the front-office systems and the back-office systems, as claimed. Applicant respectfully notes that the only disclosure of Suarez directed to the publish/subscribe messaging paradigm is provided in association with the event service disclosed in column 21, lines 35-51 of Suarez, which was previously addressed in the argument of section I in the Response to Final Office Action dated February 28, 2008.

Further, Applicant respectfully notes the arguments of sections II, III, V, VI, VIII-XI, and XIII-XV that were presented in the Response to Final Office Action dated February 28, 2008, none of which were addressed by the Office Action dated June 24, 2008. Applicant respectfully submits that the arguments of sections I-III, V, VI, VIII-XI, and XIII-XV are still applicable to the pending claims. For the interest of brevity, Applicant has not copied these arguments into the current response. Applicant respectfully requests reconsideration of the pending claims based on all of the above referenced arguments. Also, Applicant respectfully requests consideration of all of the pending claim limitations, not just of the limitations recited in independent claim 43 and dependent claims 44-51.

Conclusion

Applicant respectfully submits that the present application is in condition for allowance for the reasons stated above.   If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting the application, he is encouraged to telephone the undersigned at (972) 731-2288.

The Commissioner is hereby authorized to charge payment of any further fees associated with any of the foregoing papers submitted herewith, or to credit any overpayment thereof, to Deposit Account No. 21-0765, Sprint.

Respectfully submitted,

Date: October 24, 2008   /Michael W. Piper/
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